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VI.—*Later Prehistoric Man in British Columbia.*

By CHARLES HILL-TOUT.

(Communicated by Dr. G. M. Dawson, May 15, 1895.)

The following notes and observations on some ancient British Columbian middens and tumuli in the vicinity of the Lower Fraser are offered in the hope that they may be found to possess some ethnological value, and also with the desire to call forth a wider and more active interest in these vanishing and, for the most part, unrecorded vestiges of a distant past. The writer's explorations among these melancholy monuments have led him to believe that we possess in them valuable records of the prehistoric conditions of the aborigines of this section of the Pacific slope and of their antiquity in that region. The middens of Europe and of the Atlantic seaboard, and the mounds of the great central and eastern valleys, have long been classic ground to the archaeologist, and much labour and attention have been profitably bestowed upon them; but the middens and tumuli of British Columbia are as yet but little known to him, and have not up to this time, I think, received any serious or systematic attention at his hands. Yet the tumuli herein described constitute a distinct type of their own, with many interesting and unique features about them; and the midden from which the relics figured in the accompanying plates, I., II., III., were taken exceeds in mass and area the largest middens of Denmark, and abounds in interesting ethnological data. This particular midden, for which the name "Great Fraser Midden" has been suggested by the writer, is upwards of 1,400 feet in length and 300 feet in breadth; and covers to an average depth of about 5, and to a maximum depth of over 15, feet an area exceeding $4\frac{1}{2}$ acres in extent. It is composed of the remains of shells, mostly of the clam (*Tridacna*, sp.) and mussel (*Mytilus edulis?*), intermingled with ashes and other human refuse matter. It is situated on the right bank of the north arm of the Fraser a few miles up from its present mouth and opposite the alluvial islands called Sea and Lulu Islands. The existence of so extensive a midden, composed so largely of the remains of shell-fish that belong to salt water, at such an unusual distance from the nearest clam and mussel-bearing beds of to-day, was for a time a puzzle to me. I could perceive no satisfactory reason why these midden-makers should have chosen this particular site for their camping-ground instead of one five or six miles farther down the bank and nearer to the present source of supply of these much-coveted dainties of their larder. And upon discovery, a little later, of other middens still higher up the river by fifteen or six-

teen miles, the puzzle became proportionately greater. I found it difficult to believe that the enormous mass of shell-fish whose remains enter so largely into the composition of these great piles had been laboriously brought up against the stream in canoes or "packed" on the backs of the patient "klutchemans." It was too contrary to the genius of the people to suppose this. Making a brief survey of the district, a little later, the fact was disclosed that the mouth of the river was formerly some twenty miles higher up than it is at present, and that the salt waters of the Gulf of Georgia had in bygone days laved the base of the declivity on which the city of New Westminster now stands, and had passed on from thence and met the fresh water of the Fraser in the neighbourhood of the little wayside village of Port Hammond. And, further, that the large islands, now inhabited by ranchers, which bar in mid-stream the onrush of the annual freshets, must once have had no existence at all, and even after their formation had begun must have existed for a very considerable period as tidal flats, such as are seen to-day stretching beyond the whole delta for a distance of five or six miles. That these islands were once tidal flats is certain from the fact that the water from the wells dug on them by the ranchers is so brackish that the water of the Fraser is preferred to it. And, further, that when in this condition they afforded shelter to shell-fish similar to those whose remains are found in the middens near by, is clearly evidenced by the fact that beds of similar shells are frequently met with, *in situ*, as I have been credibly informed, when digging for water in the interior parts of the islands. But as this discovery seemed to point to a rather remote past for the formation of these middens, I was reluctant to admit the obvious inference, until I had ascertained that the enormous stumps of cedar and fir which I found projecting from the midden—several of which have a diameter of from six to eight feet, and indicate by their rings from five to seven centuries' growth—had their roots actually in the midden itself; and had obviously grown there since the midden had been formed. Ascertaining this by personal excavation, and realizing that nearly three-quarters of a millennium had passed away, for certain, since the middens had been abandoned, I could no longer resist the inference that they had been formed when the islands opposite and below them were tidal shell-bearing flats; and I have since found no reason for questioning that conclusion.

The question now naturally arises, When and for what reasons was this ancient camping-ground abandoned? Was it at a period shortly before the appearance upon them of those forest giants whose size and approximate age I have just mentioned, or was it at a much earlier date; and was it abandoned because the particular community dwelling there had been exterminated by their enemies, or was it because the clams and mussels gave out in consequence of a sudden or a gradual rise in the level of the neighbouring flats? In seeking an answer to these queries, the

cause of the abandonment of so ancient a camping-ground may possibly be found in this last reason. That is a gradual, or possibly a sudden, deposition of river detritus on these flats raised them above the reach of ordinary tides, and so brought about the extinction of the shell-fish at this point, and made it desirable for the natives to seek a camp lower down the river, where the molluscs were able, as now, to maintain an existence. This explanation has the advantage of simplicity, and seems plausible; but the former cause suggested is not unlikely the truer one. The abandonment, many centuries ago, of so many other middens elsewhere in the district along the neighbouring bays and inlets, where no such cause as this can be assigned—where clams and mussels still exist in great quantities, and have so existed from time immemorial, as the extensive midden-piles now testify—seems to call for a more comprehensive and less local explanation. And further evidence and a more thorough investigation than I have thus far been able to give them may confirm the conjecture, which certain other evidence would seem to support, that the intrusion of the Salishan emigrants into this district, and the inevitable extermination of many of the former inhabitants, is more likely the real cause of the desertion of this and the many other ancient camping-grounds of this region. Should this conjecture hereafter prove to be the truth, the results of Dr. Boas's study of the Cowitchin tongue will receive an interesting and independent confirmation. The discussion and settlement of this question, however, must needs be left till further evidence has been gathered.

In considering the time *when* the abandonment took place, the physical changes which have clearly taken place in the estuary since the shells which enter so largely into the composition of the middens were gathered from the tidal-flats that have since become tree-clad and cultivable islands, afford us some clue to work upon in the case of the midden under consideration. If we can arrive at an estimate of the age of the islands, we shall get some idea of the period of abandonment; for there is little doubt, I think, that these Fraser middens were wholly formed before those physical changes which transformed the shell-bearing flats into islands, took place. In seeking to form this estimate, we are assisted in some measure by the independent, extraneous evidence of the enormous tree-stumps now found in the midden; and although Professor Cyrus Thomas has shown, in his investigations among the mounds east of the Rockies, that no great reliance can be placed upon the evidence of the age of trees based upon the number of their rings, the size, condition and other characteristics of these stumps, all warrant one in saying that many of them are from 500 to 700 years old. The age of the islands, then, cannot be less than the age of the midden trees, though it may not be very considerably greater. Exactly how much older they are it seems impossible, from the evidence at hand at present, to say with any certainty. There is nothing in their formation, as far as I have been able to learn, for

which it is necessary to assign a greater length of time than 1,000 years. They are wholly alluvial, and only just above the level of the freshets and high tides, and were often, before they were dyked, during the annual freshets, extensively inundated. And although they are in their higher parts now thickly covered with timber, I have not been able to find or hear of a tree more than a few feet in diameter or of more than three or four centuries' growth at most. It might occur to some here that the best way to get at the age of the islands would be to ascertain the rate at which the deposits of the Fraser accumulate at this point; but a little experience of the ways of the Fraser would soon convince them that this would be no easy task. To begin with, there is no uniform rate of deposit; the amount of detritus brought down by the river depends altogether upon causes beyond our control or calculation; the quantity brought down sometimes in one year exceeding that of any other half dozen. Last year was an instance of the kind; and cases like last year happen every now and again at uncertain intervals. If amount of matter brought down by the water counted for anything, then islands as large or larger than those now existing might have been formed, if circumstances had been favourable, during last year's freshet. It will easily be seen from this statement how useless it is to go to the river for information. If, then, I am correct in estimating the period which has elapsed since the flats ceased to support shell-fish and took on the form of islands at a thousand years, something like this period has, in all probability, elapsed since this camping-ground was abandoned by its owners, if on account of the extinction of their chief food supply at this point; and possibly a very much longer period if from the other cause suggested, which much of the osteological evidence gathered from these middens seems to support, viz., the invasion of a hostile people. But placing the abandonment at the latest possible date consistent with the presence and condition of the stumps, say 500 years ago, when to this has been added the period covered by the formation of the midden mass, we still find ourselves in the possession, in this extensive pile of refuse, of a monument of the past second to none in the country in antiquity. That the accumulation of such a heap of human refuse as this midden presents, to make no mention of others almost as large, occupied a very considerable period of time there can be no doubt, I think. It possesses many features of the Danish *kjoekken-moedlinger*, which led such eminent investigators as Worsaae, Steenstrup and Lubbock to regard the period of formation of those well-known piles as extending, in the words of the learned author of the "Origin of the Aryans," over "many centuries at least, more probably several millenniums." I am not unjustified, therefore, in claiming a very considerable period of time for the accumulation of these similar and much larger heaps of British Columbia. Viewing it, therefore, from the most conservative standpoint, it may be reasonably conceded, I think,

that the first layers of this midden could hardly have been laid down much later than the beginning of our own era. That this particular midden-pile was slowly formed through the centuries, and was not the rapid accumulations of a large body of people, is more than probable from the fact that there are on its surface, at some distance from each other, four or five crowns or eminences—due, as I have personally ascertained, not to any local elevation of the subsoil, but wholly to an increase in the midden-mass itself—which, from what we know of the mode of more recent accumulations of the kind, we may reasonably infer were old family centres. From these features, as well as from many other minor ones, such as the scarcity of relics, in comparison with other camping-grounds where large communities are known to have once dwelt, it may fairly be concluded that this midden was the refuse-heap of a few families only; and when it is remembered what an enormous mass of stuff there is in it, we are bound, on any reasonable hypothesis, to allow a very considerable time for its accumulation. And from the fact that the midden is found to overlie with a sharp line of division the clean, coarse gravel of the Drift—which, as far as I have been able to discover, shows little or no trace of vegetable matter, whereas the soil in the immediate vicinity of the midden and all along this bank is rich, dark and loamy to a depth of from a few inches to over a foot—it is pretty certain there was a settlement on this bank before the appearance of post-glacial vegetation in that district. Then the midden-mass itself bears unmistakable testimony to its extreme age, nearly everything taken from it, except the stones, being in the last stage of decay; an instance of which is the condition of the shell remains. Generally speaking, the shells when taken out whole, which happens rarely, all crumble to pieces at the touch, even when they bear no marks of fire on them. And that the clam shell, at any rate, is exceedingly durable is clear from the fact that trees of over half a millennium's growth are repeatedly found along Burrard Inlet growing over refuse-heaps and gripping with their roots whole clam shells, as perfect and firm as the day they were thrown out. I have shells in my possession that cannot be less than five centuries old, from the position in which they were found, but yet it would puzzle anybody to pick them out from a number of others of the same kind from which the fish were taken only a few years ago. There are numerous other signs besides this that speak of extreme age. It rarely happens that a skull is taken out whole; it generally falls to pieces in handling. Then again, not a particle of wood has been found in the midden so far, unless it be the rotting rootlets of the trees that penetrate the mass to a depth of several feet. Axe- and tomahawk-heads, which were undoubtedly once fastened into wooden hafts or handles, are quite common; but where they are found there is never any trace of their wooden hafts to be seen. These and sundry other unmistakable evidences all seem to the writer to speak clearly of the antiquity

of the accumulation. I am anxious not to exaggerate this antiquity, especially in the face of the conclusion arrived at by Prof. Cyrus Thomas after long and careful investigations in the mound and midden districts east of the Rockies.¹ I merely desire to state the facts of the case as they appear to those who have visited and examined this midden; and think it possible that further investigation will make it necessary to extend rather than to curtail the age here indicated.

In the accompanying Plates I., II., III. are figured a fair sample of the relics thus far taken from this midden. There is nothing particularly striking either in the utensils or weapons recovered from it. They are mostly simple in make and design, and such as are found among other primitive people elsewhere. No pottery of any kind has been found in these middens; indeed the ceramic art appears to have been wholly unknown to the aborigines of British Columbia. The mortars or bowls and pestles figured in the plates were not, as is often supposed, for corn-grinding purposes. They do not seem to have possessed such; no grain of any kind being known, as far as the writer has been able to discover, among the West Coast Indians north of the Columbia. Nor have the middens thus far supplied the smallest evidence of horticulture of any kind. Some of their tools and utensils, such as the pestle, or, more properly, stone-hammer, figured in plate II., and the instrument resembling a belying-pin, figured in plate III., are beautifully made and polished. These are wrought from a kind of granite of a hard- and close-grained quality. Others again are rough and rude in their make. It appears to have been customary to fashion their bowls after the likeness of some animal. The fish-head pattern appears to have been the most common. That shown in plate II. is of an unusual type. It has a bird's head with a quadruped's body, the back being hollowed out in basin form. There was one taken from the old camping-grounds at Port Hammond which had a human face carved on one of its sides, the top of the head rising several inches above the edge or rim of the receptacle, of a type that in no way resembled or suggested the face of an Indian, and of a character wholly different from any the writer has seen elsewhere in British Columbia. Large numbers of barbed-bone spear-points are found. The stone adzes, axes, knives and chisels are generally of jade; and one or two have been found with edges as sharp and keen as if they were made of steel. Bone needles, with the eye sometimes in the centre, at other times in the end, are often found. A favourite weapon among these midden people seems to have been one formed from the young horn of the elk. These horns in their first growth are round and pointed, and at this stage are selected by the warriors for their poqamangans or skull-crackers. The horn was apparently inserted in a stick or otherwise secured to a haft. They are aptly termed skull-crackers, for

¹ *Vide Twelfth Annual Report of Bureau of Ethnology, 1890-91.*

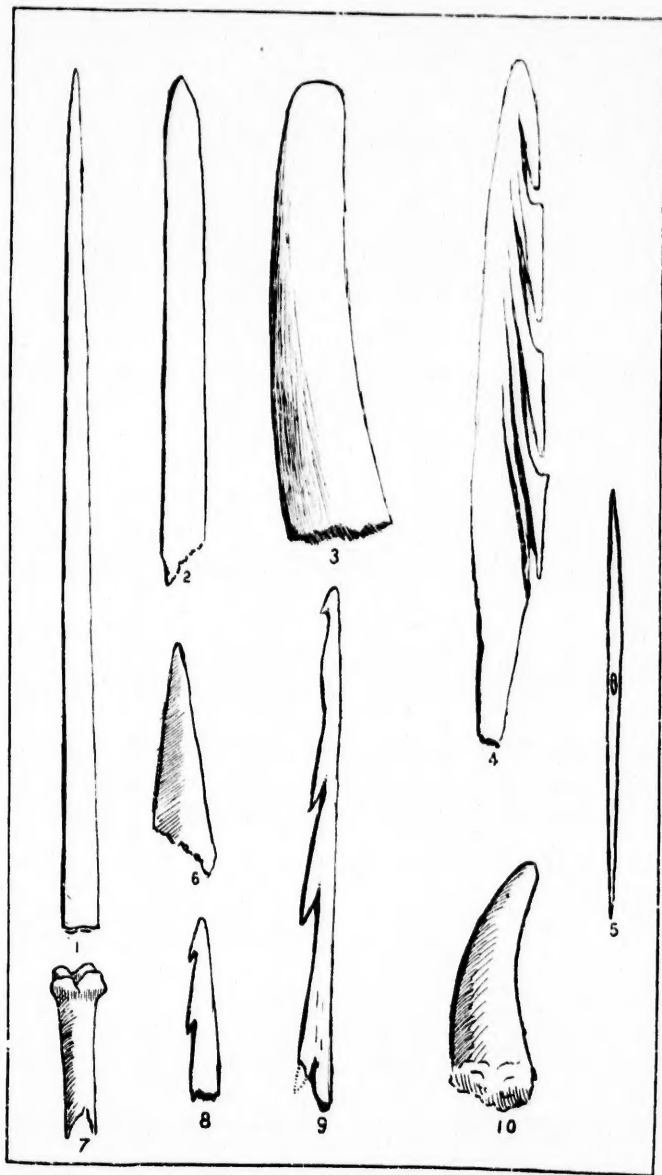


PLATE I.—BONE IMPLEMENTS FROM MIDDEN.

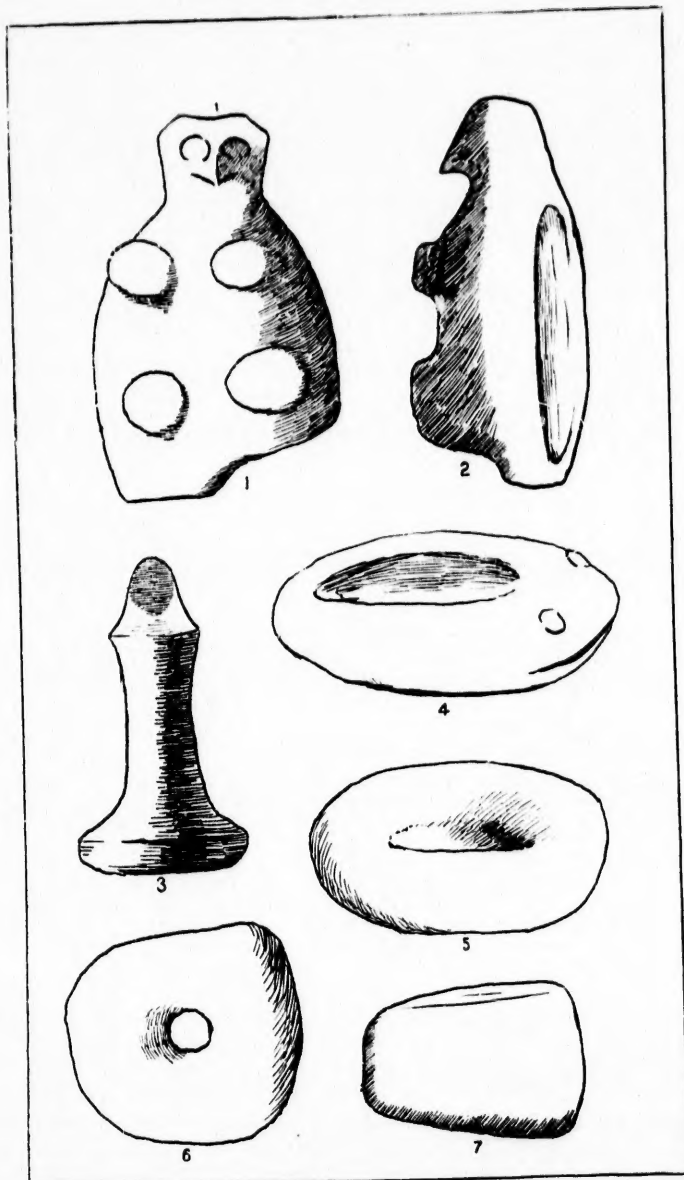


PLATE II.—STONE IMPLEMENTS FROM MIDDEN.

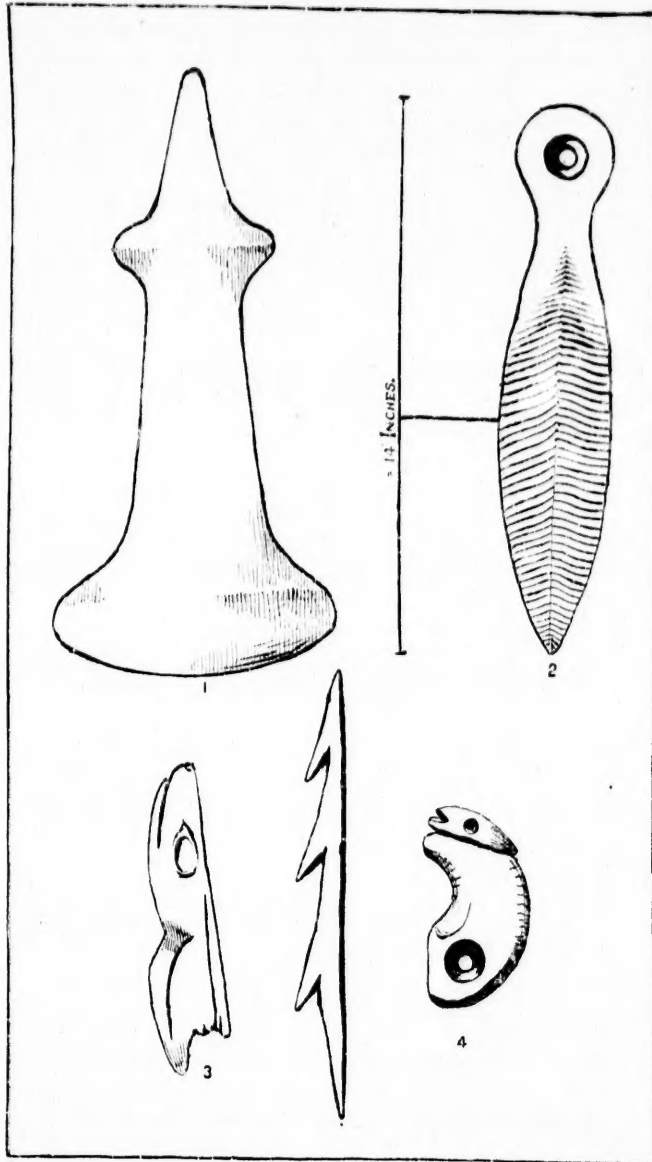


PLATE III.—BONE AND STONE IMPLEMENTS.

three adult skulls have already been taken from this midden with circular perforations in their crowns evidently made by these horn tomahawks, and as clean cut as if the piece had been taken out with a mechanic's punch. Another and significant point about the recovered crania of this midden is that they represent two distinct types: one decidedly brachycephalic, the other no less decidedly dolichocephalic. The former do not differ greatly from the crania of the Indians living round the estuary at the present time, and their presence in this midden may be due to intrusive burials; but the latter are wholly unlike the crania to be found among the Cowitchin tribes to-day; nor have I seen any so markedly dolichocephalic among the collected crania of the province accessible to me. They are too decidedly dolichocephalic to be classified among any of the typical groups of this region as given by Dr. Franz Boas, and suggest affinity rather with the Eskimo or eastern stocks, or with the southern dolichocephali than with any in this region north of California. The cephalic index of one in the possession of the Art and Scientific Association of New Westminster, B.C., is 73.85, and that of one in the writer's possession is practically the same, being 73.84; while the orbital indices of these two are 93.33 and 91.66 respectively. Both these crania are undeformed and normal and those of adults. A brief glance at the tables of the physical characteristics of the Indians of the Northwest Coast compiled by Dr. Franz Boas, and particularly those of the Lower Fraser River Indians will clearly show that these dolichocephali of the middens form a distinct type of their own and find no place among any of the eleven groups there distinguished by him.¹

Other striking features of these midden crania which differentiate them further from the Lower Fraser group are the extreme narrowness of the forehead and the lofty sweep of the cranial vault. This is particularly seen in the height of the transverse arc, which as measured in the one in my possession, and which is not an extreme type, from one auditory foramen to the other across the sagittal suture is exactly thirteen inches, and the length of a line joining the glabella and the occipital foramen is 14.40 inches. These dolichocephalic crania are the osteological evidence I hinted at just now which seemed to support the hypothesis that the middens of this region were formed by a pre-Salishan people. Whether this is so or not, this much, at any rate, seems certain, that a people of marked dolichocephaly once lived somewhere in this region, for their crania have been found at one or two other points on the Fraser between Port Hammond and the estuary.

So far no copper or other metal instruments of any kind have been found in these middens; all the relics recovered being either of bone, horn, ivory or stone. Of these by far the most numerous are bone; very

¹ *Vide* Seventh Report on the Northwestern Tribes of Can. of the British Association, 1891.

few of stone are recovered. With the middens on the shores of Burrard Inlet the reverse is the case. Great numbers of stone instruments, particularly arrow- and spear-heads, have been picked up from the beach which have been washed from the old middens by the tides; the shore at several points here having sunk apparently some feet below its former level. In addition to the spear- and arrow-heads thus found, I have discovered at more than one point along these shores—which seem to be an old armoury of the midden people of that neighbourhood—several magazines or stores of designed but unfinished spear- and arrow-heads, all bearing the undoubted marks, in the method of their cleavage, of the skilled and experienced stone worker. A few well-directed blows from a skilful hand have divided larger masses of desirable stone into numbers of triangular and ovate pieces, easily transported and worked up into finished points at the arrow-maker's leisure. The stone commonly thus broken up was either a dark argillaceous boulder of crystalline character or boulders of dark gray basalt; and as I have been unable to find any of the former in whole blocks or boulders, on the shores of Burrard Inlet or elsewhere in the neighbourhood, the breaking had probably been done at some other point by others; from whom they were not unlikely bartered for dried clams, of which they had an inexhaustible supply here, and which, we know, were highly prized by inland-dwelling tribes. And as the arrow- and spear-heads I possess, taken from the Lytton burial heaps, are of the same material it is not unlikely that this is the direction from which these stones came, as also the jade tools—jade boulders being occasionally found in the Thompson.

It may now be interesting to pass from the middens and offer a few remarks on the tumuli or burial mounds of this region. As far as is known at present the mounds of British Columbia seem to be confined to the Cowitchin area. This may not be so in reality. It so happens that on account of that area being the most settled and accessible it has received the most attention from explorers; and this seeming restriction of area may thus be accounted for. As the country becomes more widely settled and opened up others will most probably be found in other parts of the province. In order to describe these mounds the better I shall divide them into two groups—the Mainland group and the Vancouver Island group. Those on the island were first discovered some twenty years ago; and the late Mr. James Richardson, of the Dominion Geological Survey, and Mr. James Deans, of Victoria, B. C., opened up some of them; but the result of the investigation was never published, I think. I shall defer a description of these for a later occasion, my knowledge of them at the present time being too limited for me to speak with any exactitude about them, and confine my remarks to the Mainland group, which seems the more interesting of the two and which received its first systematic examination at the writer's hands, and upon which he feels he may with more propriety speak.

While the Vancouver Island group seems to extend more or less along the coast throughout the Cowitchin area, from beyond Sooke on the southwest to Comox on the east, that on the mainland is confined at present to a narrow strip on the banks of the Fraser extending from the village of Hatzic to Port Hammond.¹ Those opened and examined by myself are found in a cluster on a ranch at Hatzic, on the right bank of the river. These sepulchres, with their ancient mode of burial, belong to a comparatively distant past. The Indians now dwelling in the neighbourhood appear to know nothing of them; disclaim all knowledge of the people who built them and are quite unconcerned at their being opened or disturbed. This indifference in the face of the zealous vigilance they exercise over their own old burial grounds or depositories of the dead is the more striking. The difficulty of procuring osteological data from any of the burial grounds of the modern tribes is well known to any who have attempted to do so, and this unusual indifference displayed towards these mounds by the Indians of the district would seem to suggest that they belong to some antecedent and forgotten tribes. Indeed, an aged Indian of the place informed the writer that his people called them "Ghost heaps"; that they were there when they first came into those parts; that no one knew who made them and that no Indian would approach them on any account. Indian traditions, one knows, are not very reliable data, but in this instance they support the evidence of the mounds themselves and may have a basis of truth in them. Whether they antedate the present tribes or not they were undoubtedly built when a mode of burial prevailed very different from that practised by their ancestors when the whites first came in contact with them; and the osteological data they have yielded reveal a habit of cranial deformation of a kind very unlike that known to have been practised in this region.

These tumuli are interesting, too, apart from the question of their antiquity as they seem to present to us, either a development from simple conceptions and ideas concerning the dead to more advanced and complex ones; or else they mark in a most interesting manner the different degrees of honour their builders were wont to pay to their dead. For they show a markedly graduated transition from simple interment of a body beneath a pile of clay to the construction of comparatively elaborate tombs, composed of a great number of boulders arranged in precise and geometrical order and covered with layers of different kinds of sand and clay. But I shall best describe them if I take them in what seems to me from the evidence their natural order, which I find may be with propriety arranged in a fivefold series. The simplest and first of the series, and, as I am led to believe the oldest, was formed by placing the dead body on the ground somewhat below the level of its surface and

¹ Since the above was written the writer has learned of the existence of another group farther south near the boundary line.

then heaping over it the neighbouring soil; for there are hollows around these mounds showing that the soil of which they are formed was taken from the spot. In all these mounds throughout the whole series, whether simple or otherwise, it should be stated, one body only was ever interred. About this there is no doubt; and this fact of separate, individual interment is the more striking in the more elaborate tombs, which must have occupied many days, if not weeks, in their construction. Many of these simpler and less conspicuous mounds have doubtless been levelled by the ranchers of that neighbourhood without attracting attention; as the bones of the body in these are always found wholly decomposed, with the single exception at times, of a bit of the lower jaw; and their matter has been so closely integrated with the soil that the fact that a body once lay there is only to be discovered by the presence of a darker shade or streak in it; though the enamel casings of the teeth themselves may generally, I think, be recovered if the mounds are opened carefully. Absolutely nothing but the teeth, or their remains, or, as stated before, tiny fragments of the lower jaw, which crumble away in the hand, has been found in these clay mounds; not a vestige of tools, weapons or belongings of any kind. And I may here add that it is one of the singularities of these sepulchres that not a single relic of stone, not so much as a single flake of any kind, has been taken from the whole series, though I have used the greatest care in seeking for them. In this respect the interments in these mounds present a strong contrast to those of the Shuswaps of the sand-hills round Lytton, in which arrow- and spear-heads, flakes and other stone relics are found in great numbers.¹ These clay or earth mounds are of varying dimensions, some of them evidently children's graves, being only a few feet high and a yard or two in diameter; but like the more elaborate ones are always circular in form, and sometimes have a diameter of 20 to 25 feet. Next in the series is a class of mounds formed in part like the last but differing from them in having a pile of boulders heaped up over and around the spot where the body originally lay. The plan of interment in this second class of mounds seems to have been to place the body in the centre of the spot chosen for the grave — whether sitting or prostrate I have not been able to decide, but am inclined to think it was probably doubled up in some way — and then to surround and heap over it a large pile of boulders; and over these again to heap up earth to a height of from 6 to 9 feet. The third class differs from these only in having a stratum of charcoal, extending over the whole area of the mounds between the boulders and the outer covering of clay, evidently the remains of a large fire. Whether these fires were kindled for sacrificial or for some simpler ceremonial purpose it is impossible from the evidence now to say. The slaughter and cremation of

¹ *Vide* Dr. G. M. Dawson's Notes on the Shuswap People of British Columbia. — Trans. Roy. Soc., Canada, 1891.

slaves, on the death of their owner or chief, is not wholly unknown among the tribes of British Columbia; ¹ but whether we see an instance of this practice among these old mound-builders, or whether the fires were lighted in the belief that they comforted the shades of the departed on their journey to the nether world ² we may never know. ³ The next order of the series differed again from the last in having a large quantity of coarse dark sand in their central parts. It would seem that in constructing these particular graves, after piling up the boulders over the body the builders had covered them with a deep layer of quicksand — which in that district underlies the clay top-soil,—and over this again had strewn a layer of this coarse dark sand. Where they procured this latter sand from I am not able to say. There is none like it in the neighbourhood at present. It is much coarser and darker in colour than that now found in the Fraser near by. But wherever they brought it from they were not sparing of its use. The rancher, on whose farm these tumuli are found, took out from one side of one of these between twenty and thirty sacksful for building purposes; and when I opened it up later there was still a great quantity left in it. This mound is one of the most interesting of the series inasmuch as it accidentally presents us with some independent, positive evidence of their antiquity. On one side of its crown the stump of a large cedar tree is seen projecting, the whole in the last stages of decay. To any one who knows anything of the enduring nature of the cedar of British Columbia the evidence which this cedar stump offers will be very convincing. A cedar tree will lie on the ground for a thousand years it is estimated by lumbermen and others, and yet its wood will be firm and good and fit to make up into doors and window-sashes. There is now, not two hundred yards from this mound, a living fir tree growing astraddle over a prostrate cedar log, the age of which, from its dimensions, cannot be much less than five centuries; and yet the wood of the cedar under it is as solid and firm as if it had been cut down yesterday. It is almost impossible to say how long the cedar of this region will endure; and if a claim of one thousand or twelve hundred years be made for the growth and complete decay of this tree, whose roots have crumbled and mouldered away among the bones hidden beneath them for many a long year, most British Columbians will think that a very moderate claim indeed; and it is very probable that a much longer period than that has elapsed since the mound was constructed. This mound is also interesting from the fact

¹ *Vide* The Rev. Father Morice on the Dénés. — Proceedings of the Canadian Institute, 1892-3.

² Longfellow's Legend of Hiawatha.

³ Prof. Cyrus Thomas in his paper on the mounds in the States in the report previously referred to speaks of a custom which prevailed very extensively among the mound-builders of the northern districts of removing the flesh of the dead bodies before final burial and burning it over the grave when this took place. It is possible these fires were lighted for a similar purpose.

that it is the only one that has yielded any osteological data of importance. Whether from the large quantity of sand in it which may have acted as a drain, or from the fact that this large tree stood over it for many centuries, or from the combination of circumstances, the human remains in this mound have been better preserved, in part, than in the others. The long bones and several others, as well as the skull, were taken out almost whole; though, unfortunately, all but the skull soon crumbled away. This, happily, I have been able in part to preserve. It is a strangely deformed skull, and in its excessive abnormality is probably without a parallel throughout this region of contorted crania. It does not appear, moreover, to conform to any of the three types known to have been practised in former times on this coast.¹ A bit of a second skull was recovered from one of the other mounds curiously enough preserved, when even the teeth had decayed, leaving nothing but an outline of their form in enamel, by being saturated with the verdigris from a copper ring buried with and alongside it. This piece, though small, is fortunately an important bit. It formed the upper part of the left orbit with adjoining portions of the frontal bone which shows the same extraordinary depression as is seen in the other. From this evidence it would seem that these mound builders practised cranial contortion of a very exaggerated kind and of a type unlike any known elsewhere in British Columbia past or present. Whether the custom will throw any light upon their history or help to identify them remains yet to be seen. To continue the description of the mounds, I may say, the fourth class differs in several essential features from the preceding series. The chief characteristic seen here is an outer rectangular boundary of boulders, set side by side in the form of a square, having each of its sides facing towards one of the cardinal points of the compass like the pyramids of Mexico. This square was apparently laid off before the body was interred, which was placed in the centre and covered as before with a pile of boulders similar to those forming the square. Over these again, and between them and the outer square, a layer of quicksand was placed; then followed a thin layer of the dark gritty sand found in the other mound; over this again came more quicksand, followed by a layer of coarse brown sand over the whole extent of the mound extending to and beyond the outer boulders; and on the top of this the sepulchral fire was kindled. Over the ashes of this fire more quicksand was heaped, followed by the capping of clay. (*Vide* section of this in plate IV.) The base or floor of this mound must have been sunk several feet below the level of the general surface of the land. The mound stood about six feet above the surrounding soil, but its height from top to bottom at the centre was nearly eleven feet. The copper bracelet figured on plate VI. was taken from this mound. The copper awl or spindle shown in the same

¹ *Vide* Sixth Report of the B. A. A. S. on the Northwestern tribes of Canada, pp. 95-96.

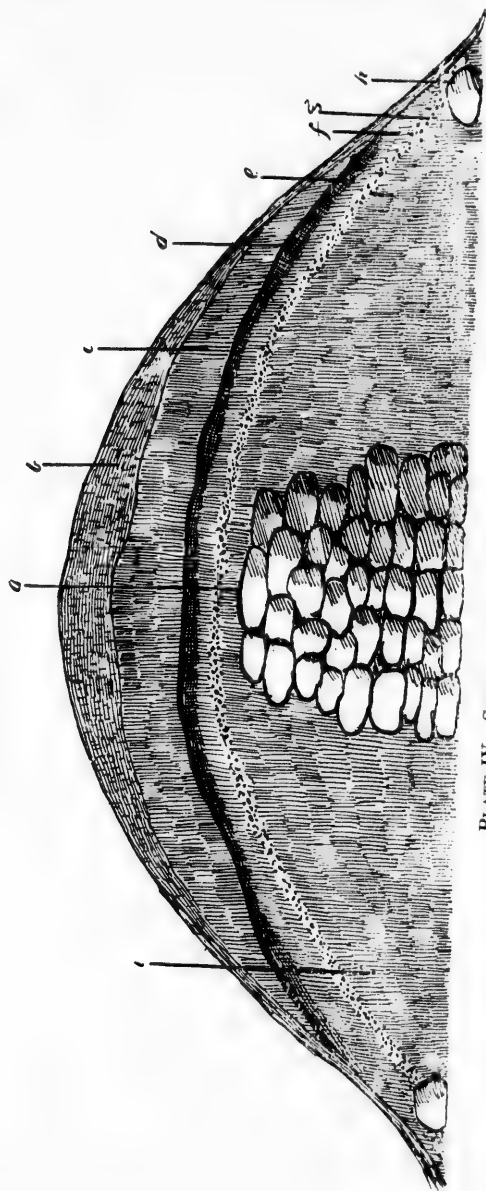
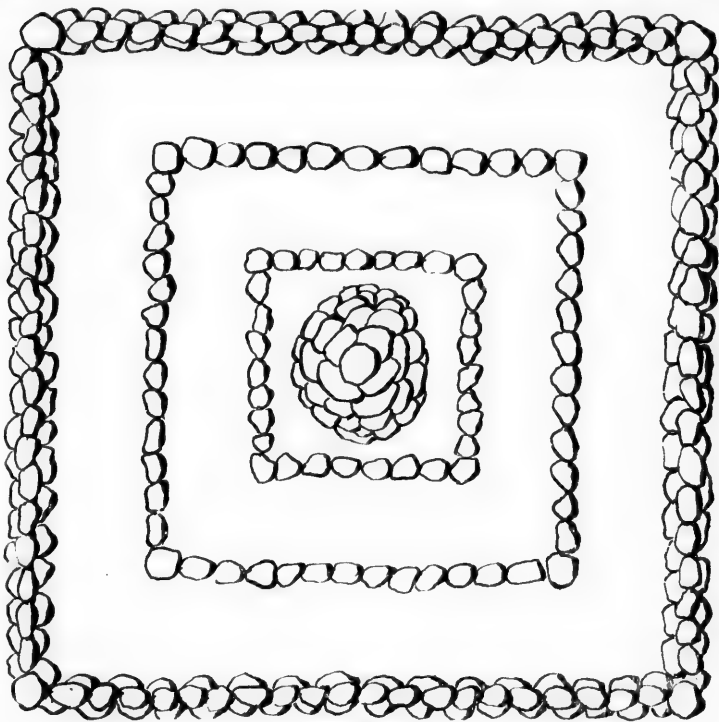


PLATE IV.—SECTION OF MOUND OF FOURTH SERIES.

Explanation of lettering in Plate IV. :

- a*—Central pile over body.
- b*—Clay.
- c*—Quicksand.
- d*—Charcoal.
- e*—Coarse brown sand.
- f*—Quicksand.
- g*—Dark gritty sand.
- h*—Outer square of boulders.
- i*—Quicksand.

plate (3) was taken from the mound in which the skull and bones were found; and the rectangular object (a pair of which was recovered) from a mound of the fifth order. The ring on this plate (4) was taken from a mound of the second class and was the one found in conjunction with the bit of skull before spoken of, inclosed in a fold of hide and wrapped up in a wad of cedar bark. These five copper objects, with the addition of some bits of red ochre, a fragment of coarsely woven blanket of the hair of the mountain sheep and a small quantity of human hair of two colours, black and brown, form the entire collection of relics taken from these mounds.



36 x 36 feet.

PLATE V.—PLAN OF MOUNDS OF FIFTH SERIES.

The next and concluding class of the series shows a considerable advance upon the preceding ones. The plan here, as seen in plate V., is much more elaborate and complex. Instead of the one outer square as in the others formed by a single line of boulders, we have three squares, one within the other; in the innermost of which, beneath the pile of boulders, lay the body; and the outer one is composed in this instance of

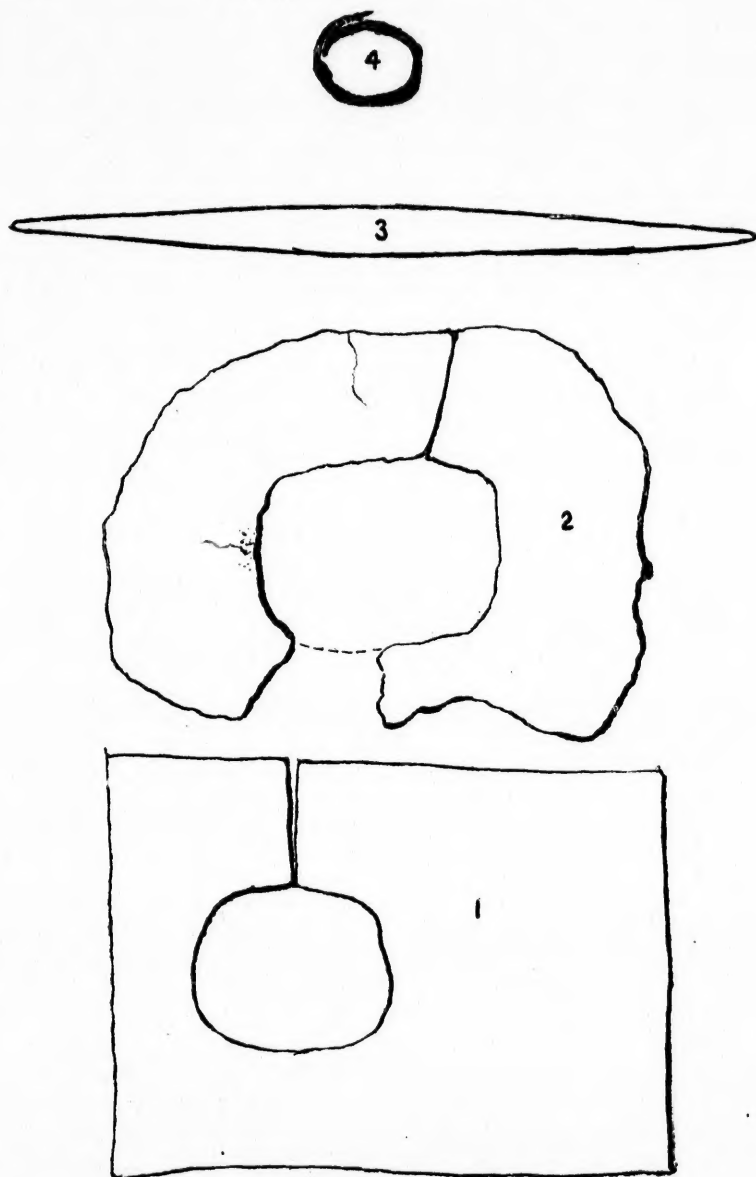


PLATE VI.—COPPER INSTRUMENTS FROM MOUNDS.

two parallel rows of boulders, capped and united by a third. I am sorry to say that the superficial mass of this mound, and another alongside and apparently like it, had been too much disturbed before my attention was drawn to them to allow me to make a section plan of their structure above the boulders, or to speak with any certainty of anything beyond their ground plan. But judging from the others and from the sandy condition of the soil on them, I should be inclined to say they much resembled those of the fourth class in this respect. In connection with this employment of different sands I may state that a number of mounds have recently been opened up on the St. John's River, Florida, the chief characteristic of which seems to be the employment of different kinds of sand in distinct layers.¹

To give an idea of the labour involved in the construction of these mounds it may be stated that it took a man, with the help of a hand barrow and other suitable tools, eight days to remove a few yards off the soil only from the underlying boulders of the mound whose ground plan is given in plate V. What time it must have taken the builders to erect one of these more elaborate sepulchres with their inferior tools can easily be imagined. To bring and place the boulders alone must have taken a number of men many days;² and many more must have been consumed in bringing such large quantities of sand in their simple receptacles, and in digging the clay which caps the structure throughout its whole area to a depth of several feet. Some of the mounds of the Vancouver Island group are pyramidal in form. Whether any of these latter ones were of that form originally cannot now be determined. Exteriously they present the appearance of truncated cones rather than four-sided pyramids, but this may easily be due to time and the elements. The boulders, I may here state, found in these mounds weigh from 25 lbs. up to 200 lbs. each and were apparently brought from some of the mountain-stream beds, no stone of any kind, not even a pebble, being found anywhere on the ranch. There are several of these streams a mile or so back from the river where they might have come from.

In concluding my remarks I trust it may be conceded that the notes I have been able to gather show that the mounds and middens of British Columbia are worthy of the attention of archaeologists; and that we possess in them positive and reliable records of the antiquity and culture-status of the prehistoric tribes of that province. That any degree of civilization higher than that manifested by the Haidas and their neighbours, the Tsimseans, has ever existed in that region, I think, is extremely doubtful; the evidence from the mounds and middens all tending to strengthen and corroborate what has been gathered from other sources,

¹ *Vide* "Archæologist" for April, 1895.

² The total weight of the boulders in this mound could not be estimated at less than 25 to 30 tons.

that the aborigines of the Northwestern Slope, from the Mackenzie to the Yukon and from that river to the Columbia, if not beyond, had scarcely emerged from primitive savagery and barbarism when Europeans first came in contact with them a little over a century ago.

My best thanks are due to my friend Mr. Carlyle Ellis, of Vancouver, B. C., for his kind assistance in preparing the drawings for the plates accompanying this paper.

REMARKS ON A SKULL FROM BRITISH COLUMBIA.

The fragment of a skull found by Mr. Hill-Tout consists of the roof of the cranium, the right temporal bone, a portion of the face and of the lower jaw. Owing to the pressure sustained in the moist ground the skull is very much deformed, so much so that the adjoining fragments can no longer be fitted together. The parietal bones show long transversal cracks on the surface, near the vertex, which prove that the curvature of the bones of this region has been very much increased. To a still higher degree has this deformation taken place below the obellion. The posterior portion of the frontal bone shows a long crack in antero-posterior direction. The bone is so much flattened that this crack gapes at its lower end. The lower portion of the frontal bone is broken off and is not so much flattened by the pressure of the ground; therefore, the upper and the lower parts of the bone, when fitted together in the middle, do not touch at the sides. The right temporal bone is also broken off. It is less deformed by the pressure of the ground, and is therefore much rounder than the roof of the cranium. The preserved portion of the face includes the malar bone, and, therefore, joins both the frontal and the temporal bones, but cannot be made to fit accurately on account of the post-mortem deformation of the skull.

The cracks of the bones prove that the pressure of the ground was directed against the forehead and the occiput and that it brought about a considerable flattening of the skull. But the lower portion of the forehead shows clearly that during the life of the individual the skull had been deformed in the same manner as is practised by the present Indians of southeastern Vancouver Island, Puget Sound and Fraser River. Skulls of the same type have been found in the stone burials of southeastern Vancouver Island. The excessive flattening which makes the skull similar to Chinook skulls is due to post-mortem deformation. What little remains of the face indicates that its shape resembled the face of the present Indians of this region. The orbit is high and rounded; the nasal bones are wide and low.

The skull seems to have belonged to an elderly woman. Its processes are graceful, and it seems rather small. The jaw is not so large as we are accustomed to find among males of this region. On the inner side all traces of sutures have disappeared, while the upper portion of the coronal suture remains discernable on the outside. The sagittal suture is completely synostosed; the lambdoid suture is very complicated and remains open; the squamous suture is also open. The teeth are not so much worn as might be expected from the advanced state of synostosis of the skull. Their crowns are somewhat worn down, as is always the case with people who eat much food that is cleaned and cooked imperfectly. They are healthy, and no loss of teeth has occurred during life.

The inside of the frontal bone shows a number of nodular exostoses: one on the left side, two large ones and one small one on the right side. Others are found on the inner side of the temporal bone, and still larger ones, but not so well defined, on the parietal bone. The whole region of the obellion is much thickened. According to Dr. M. Prudden, these formations are not of syphilitic origin.

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